



US EPA RECORDS CENTER REGION 5



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A Member of The IT Group

May 27, 1999

Ralph Dollhopf
On-Scene Coordinator
U.S. Environmental Protection Agency
Region V
9311 Groh Road
Room 216
Grosse Ile, Michigan 48138

**RE: South Green Avenue Site
Detroit, Michigan**

Dear Mr. Dollhopf:

On May 12, 1999, a Draft Waste Characterization Work Plan was submitted to the U.S. EPA. The purpose of this draft plan was to present the procedures to collect data to determine if impacted materials would be defined as hazardous or non-hazardous based on soil sampling and analysis. In addition, the draft plan included collecting data to evaluate potential removal options. The U.S. EPA provided comments on the draft work plan during a May 24, 1999 conference call. On May 26, 1999, a second draft of the work plan that addressed the U.S. EPA's comments was submitted to the U.S. EPA. On May 26, 1999, the U.S. EPA approved of the second draft of the work plan. A final copy of the work plan is enclosed. The plan will be implemented according to the schedule presented in this plan. The U.S. EPA will be notified not less than 3 business days in advance of field work.

If you have any questions or comments on the above information, please contact either Eric Lee of Michigan Consolidated Gas Company at (313) 256-5095 or myself at (248) 473-0720.

Sincerely:

IT Corporation

Daniel Strybel, CPG, PMP
Project Manager

cc: Eric Lee, MichCon
Abed Houssari, MichCon
David Maurer, Pepper Hamilton LLP
Michael Anastasio, U.S. EPA
Deborah Fisher, City of Detroit
Ed Novak, Michigan Department of Environmental Quality
Christopher Harvey, Ecology and Environment, Inc.
Ray Scott, City of Detroit
Mark Seaman, IT Corporation

**FINAL
Waste Characterization Work Plan
South Green Avenue Site
Detroit, Michigan
May 26, 1999
(U.S. EPA Approval Date)**

1.0 OBJECTIVE

This work plan pertains to the South Green Avenue Site in Detroit, Michigan (see attached map) and the purpose of this plan is to collect data to determine if the waste materials, debris and/or impacted soils (subsequently referred to as "impacted materials") would be defined as hazardous or non-hazardous based on sampling and laboratory analysis. The characterization data will be used in the future evaluation of removal options as part of the Engineering Evaluation/Cost Analysis (EE/CA). In addition to the characterization sampling, samples will also be collected to evaluate potential removal options. The information presented in the *Final Environmental Assessment to Support an Engineering Evaluation/Cost Analysis* was used to determine the areas that would likely require removal action.

2.0 SAMPLE LOCATIONS

Four (4) characterization sample locations have been selected based on the analytical results of the impacted materials (ie. samples exhibiting the highest polynuclear aromatic hydrocarbon concentrations) and/or visual observations recorded during the test pit assessment (ie observations of stained soils and/or non-aqueous phase liquids (NAPLS)). The four (4) characterization sample locations are as follows:

1. Area between test pit TP-19 and TP-4 at south central area of the Site (former 75,000 cubic foot gas holder and water gas plant);
2. Test pit TP-17 area (between the two former gas holders);
3. Test pit TP-9 area at southern corner of the site (former 200,000 cubic foot gas holder); and,
4. The western corner of the site at test pit TP-23.

3.0 SAMPLE COLLECTION

Waste characterization samples will be collected using a track excavator or rubber tired backhoe. Each of the four (4) areas specified above will be treated as a separate excavation, as the impacted materials within each area may require different removal actions/treatment.

The waste characterization samples will be collected by excavating the surface soils at each sample location to gain access to the impacted materials encountered during the environmental assessment. The surface soils will be stockpiled adjacent to the excavation.

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Three (3) aliquots will be collected from each surface soil stockpile and will be combined to form one composite sample per locations for laboratory analysis. The analysis of the four (4) surface soil composite samples (one per sample location) is discussed in **Section 4.0**.

After the removal of the surface soils, the impacted materials will be excavated as a full vertical column, combining all of the impacted materials encountered to the top of the clay (approximately 8 to 10 feet below the surface). The excavated materials will be consolidated within the excavation, forming a representative sample of the materials encountered. The sampling will be performed once the soils are consolidated, allowing for sampling directly from the excavation using the excavation equipment

Each of the four (4) characterization sampling areas will be excavated to provide a 5 to 10 cubic yard volume of consolidated impacted materials for characterization sampling. Three (3) aliquots will be collected from each of the characterization sample areas and will be combined to form one representative sample per location for laboratory analysis. The analysis of the four samples of the consolidated materials (one per sample location) is discussed in **Section 4.0**

Because of the presence of some stained soils and NAPLs, stabilizing agents (ie. quick lime, fly ash or portland cement) may be required to enhance the handling characteristics of the materials to allow for the transport to and acceptance by a disposal or treatment facility. Determining the need for stabilizing agents will be based on the evaluation in the field of the impacted materials after they have been consolidated. If stabilizing the impacted materials is determined to be required, subsamples may be prepared from the composite/consolidated materials at each characterization sample location. A stabilizing agent may be added, if necessary, to each subsample with the volumetric ratio of the additives being determined based on field observations. The addition of the stabilizing agents (if required) may be made within the excavation at each characterization sample area, by placing the material directly into the excavation in a measured volumetric rate. Stabilized subsamples, if prepared, may be sent to a laboratory for analysis as indicated in the subsequent section.

Once the waste characterization samples have been collected, the excavated materials will be returned to the excavation, and the surface soils stockpiled adjacent to the excavation will be used as the final cover of the area

4.0 ANALYTICAL METHODS

A summary of the analysis of the waste characterization samples is presented in **Table 1**. The results of the TCLP, reactivity, corrosivity and ignitability analyses will be used to characterize the materials (ie. non-hazardous or hazardous).

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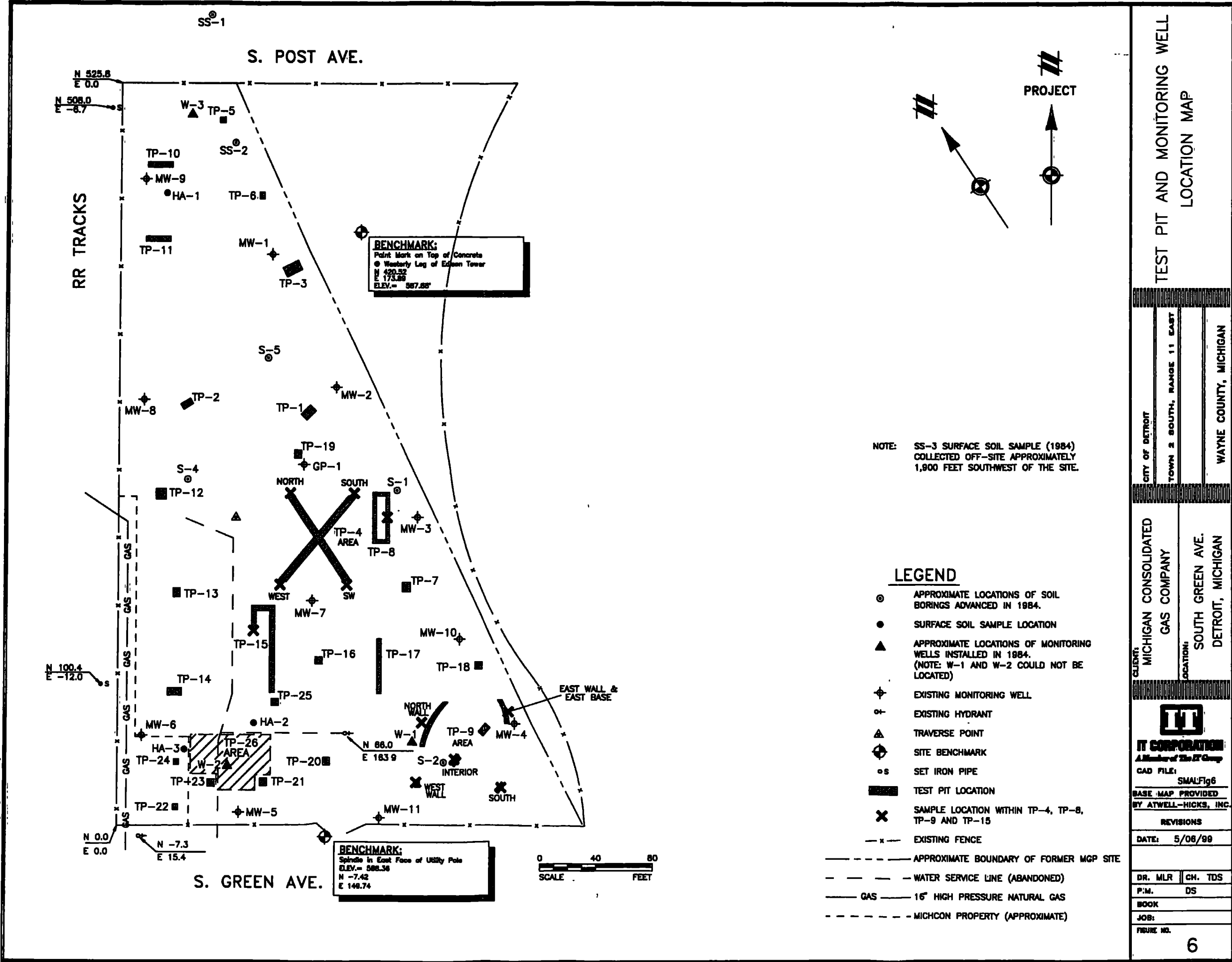
The BTEX, polynuclear aromatic hydrocarbons, lead and cyanide analyses of the surface soils will be used to determine if such soils require removal actions. The remaining analyses will provide data to evaluate potential removal options pertaining to the impacted materials. In addition to the above analyses, a paint filter analysis may be conducted in the field on one sample for each characterization sample location.

5.0 SCHEDULE

The field work described in this work plan will be initiated within 15 business days of the latter of the U.S EPA's approval of this work plan or the date an access agreement with City of Detroit is procured. The EE/CA will be initiated no later than fifteen days (15) days after all samples have been submitted to the laboratory.

Table 1
Summary of Analysis of Soils and Impacted Materials
Waste Characterization Work Plan
South Green Avenue Site
Detroit, Michigan

| | Composite Sample from Surface Soil Stockpile (one per location) | Consolidated Impacted Materials (one per location) | Stabilized Subsamples of Impacted Materials (if prepared) |
|---|--|--|--|
| TCLP (volatiles, metals and semi- volatiles) | 4 | 4 | To be determined in field |
| PCBs (EPA Method 8082) | 4 | 4 | To be determined in field |
| Reactivity, corrosivity, flammability and ignitability | 4 | 4 | To be determined in field |
| Total Petroleum Hydrocarbons (EPA Method 8015) | 4 | 4 | To be determined in field |
| BTU | 4 | 4 | To be determined in field |
| Soil Moisture | 4 | 4 | To be determined in field |
| BTEX (EPA Method 8260) | 4 | 0 | 0 |
| Polynuclear aromatic hydrocarbons (EPA Method 8270) | 4 | 0 | 0 |
| Lead (EPA Method 6020) | 4 | 0 | 0 |
| Total cyanide (EPA Method 9010) | 4 | 0 | 0 |



TEST PIT AND MONITORING WELL
LOCATION MAP

CITY OF DETROIT
TOWN 2 SOUTH, RANGE 11 EAST
WAYNE COUNTY, MICHIGAN

CLIENT: MICHIGAN CONSOLIDATED
GAS COMPANY
LOCATION: SOUTH GREEN AVE.
DETROIT, MICHIGAN

IT CORPORATION
A Member of The IT Group
CAD FILE: SMALF1g6
BASE MAP PROVIDED
BY ATWELL-HICKS, INC.

REVISIONS
DATE: 5/08/99
DR. MLR CH. TDS
P.M. DS
BOOK
JOB:
FIGURE NO. 6